

IBAO-65

Isobutylaluminumoxane, Type 65 ^a

IBAO-65 is a co-catalyst product soluble in aromatic and saturated aliphatic and cycloaliphatic hydrocarbons.

CAS number
220326-29-4

EINECS/ELINCS No.
606-903-1

TSCA status
listed on inventory

Characteristics

Appearance	Clear colorless liquid
Density, 25°C	0.691 g/cm ³
Freezing point	< -90 °C
Solubility	Soluble in aromatic and saturated aliphatic and cycloaliphatic hydrocarbons
Stability to air	May ignite on exposure
Stability to water	Reacts violently
Viscosity, 25°C	0.4 mPa.s

Composition

Aluminum	^{b d} 3.0-4.0 wt%
Hydrogen	^{b c} ≤ 6.0 molar%
Isobutane	^{b c} ≥ 92.0 molar%
Isobutylene	^{b c} ≤ 3.0 molar%

Notes:

^a IBAO has an O/Al of ~0.65 and is similar in composition to a product called 'hexaisobutyltetraaluminumoxane' (HIBAO), which has an O/Al of 0.75. For more information on aluminumoxanes, see Technical Bulletin 'Aluminumoxanes from Nouryon'. You may obtain a copy from your Nouryon sales manager or technical representative. Product obtained in heptane solution by hydrolysis of triisobutylaluminum at Al ratio of 0.65 (nominal). ^b Data for heptane solution containing about 3.5% aluminum this corresponds to an IBAO-65 concentration of about 13%. ^c Calculated from gas chromatographic analysis of hydrocarbons and hydrogen obtained by hydrolysis. ^d Determined by titration of aqueous hydrolyzate

Applications

Heptane solutions of IBAO-65 is used as a cocatalyst in the Ziegler-Natta polymerization of olefins.

Storage

Heptane solutions of IBAO-65 are stable when stored under a dry, inert atmosphere and away from heat.

Packaging and transport

Heptane solutions of IBAO-65 are available worldwide in cylinders and portable tanks. In North America only, IBAO-65 in heptane is also available in tank trailers and rail cars. Containers are fabricated from carbon steel and are equipped with dip tubes for top discharge and all connections are located in the vapor space. Both packaging and transport meet the international regulations.

Safety and handling

Heptane solutions of IBAO-65 may ignite on exposure to air and react violently with water. Heptane solutions of IBAO-65 must be handled under a dry, inert atmosphere, e.g. nitrogen or argon. Water must be scrupulously removed from process equipment prior to putting it into meal alkyls service. Failure to do so may result in an explosion. Products of complete combustion of heptane solutions of IBAO-65 are aluminum oxide, carbon dioxide and water. Heptane solutions of IBAO-65 cause severe burns to the skin and eyes. It is imperative that proper personal protective equipment can be worn when handling heptane solutions of IBAO-65. Please refer to the Safety Data Sheet (SDS) for further information on the safe storage, use and handling of IBAO-65. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at nouryon.com/sds-search

Additional information

IBAO-65 is a commercial product available as 3.5 wt% Al in hexane or heptane. Consult your Nouryon representative for further information.

All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Nouryon, however, makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nouryon does not accept any liability whatsoever arising out of the use of or reliance on this information, or out of the use or the performance of the product. Nothing contained herein shall be construed as granting or extending any license under any patent. Customer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes. The information contained herein supersedes all previously issued information on the subject matter covered. The customer may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers and footers, and should refrain from any unauthorized use. Don't copy this document to a website.

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The Nouryon logo consists of a stylized blue 'N' followed by the word 'ouryon' in a lowercase, sans-serif blue font.